

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS

1. (Currently Amended) A stirling cooler comprising:

a case provided with a cold tip at an end thereof;

a cylinder fixedly installed in the case and provided with a piston reciprocating therein;

a displacer installed in the piston such that the displacer can reciprocate;

a regenerator positioned between the displacer and the cold tip;

a heat exchanger connected to the regenerator and the cylinder, said heat exchanger including an inner heat exchanger installed in a heat exchange chamber positioned between the cylinder and the case, and an outer heat exchanger installed on an outer surface of the case opposite to the inner heat exchanger; and

a packing positioned at an area in which the cylinder contacts the case,

wherein the packing is interposed between a flange protruding from an outer surface of the cylinder and a stair of the case on which the flange is seated in a radial direction of the cylinder, and

wherein an O-ring is installed at a portion of the cylinder contacting the case in an axial direction of the cylinder.

2. (Canceled)

3. (Previously Presented) The stirling cooler as set forth in claim 1,
wherein an O-ring is installed at an outer surface of the cylinder opposite to the
inner heat exchanger.

4. (Canceled)

5. (Previously Presented) The stirling cooler as set forth in claim 1,
wherein the O-ring and the packing are respectively positioned at opposite sides
of the heat exchange chamber in the axial direction of the cylinder.

6. (Previously Presented) The stirling cooler as set forth in claim 1,
wherein the flange protrudes perpendicularly from an outer surface of the cylinder.

7. (Previously Presented) The stirling cooler as set forth in claim 1,
wherein the flange of the cylinder has a ring shape.

8. (Previously Presented) The stirling cooler as set forth in claim 1,
wherein through holes for connecting the flange of the cylinder and the stair of the
case by screws are formed through the packing.

9. (Previously Presented) The stirling cooler as set forth in claim 1,

wherein the packing has a ring shape so that it is inserted onto the outer surface of the cylinder.

10. (Previously Presented) The stirling cooler as set forth in claim 1,
wherein the packing has a radius, defining a distance from the center thereof to the outer circumference thereof, being the same as a distance from the center of the cylinder to the flange of the cylinder in a radial direction of the cylinder.

11-20. (Canceled)